

**BY ORDER OF THE COMMANDER
AIR COMBAT COMMAND**

**AIR COMBAT COMMAND
INSTRUCTION 11-401**

9 MAY 2016



**OPERATIONAL PROCEDURES-
THUNDERBIRDS**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFPD 11-4, *Aviation Service*. This instruction applies to all USAFADS personnel and activities, including Air National Guard (ANG) or United States Air Force Reserve (USAFR) personnel assigned to the squadron. It covers operational procedures for the USAF Air Demonstration Squadron (USAFADS) (Thunderbirds). The 57 Wing will supplement this ACCI, as applicable. Once 57 WG/CC approves the Supplement, a copy will be sent to the OPR of this publication. This ACCI, along with the 57 WG Supplement, specifies responsibilities, procedures for planning missions, intraflight communications, and conducting normal and emergency operations. These documents also provide a description of the maneuvers to be flown, to include a detailed description of each air demonstration maneuver from the points of view of the Leader, Left Wingman, Right Wingman, Slot Pilot, and Solo Pilots. A copy of this instruction is authorized for each USAFADS aircrew member and support personnel, as necessary. This publication may be supplemented at any level, but all direct Supplements must be routed to the OPR of this publication for coordination prior to certification and approval. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority in accordance with paragraph 1.4 The use of the name or mark of any specific manufacturer,

commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include: Changing the title of the ACCI from ACCI 11-USAFADS to ACCI 1-401 for standardization purposes; deleting the bulk of the original ACCI and directing it to be included into a 57 WG Supplement, because much of the deleted material was pertinent to the Thunderbirds only and not to HQ ACC; delineating responsibilities that affect all applicable agencies on the ACC staff, other supporting organizations, the USAF Warfare Center, 57 Wing, the USAFADS and the airshow community, specifying, in detail, when specific requirements need to be accomplished; and directing specific levels of coordination prior to the Thunderbirds submitting requests for COMACC approval.

Chapter 1

INTRODUCTION

1.1. General. This instruction provides the foundation for the administrative and operational procedures specific to the accomplishment of the USAF Air Demonstration Squadron (USAFADS) Thunderbirds' mission. 57 WG will Supplement this ACCI, as necessary. This ACCI, along with the 57 WG Supplement, details the operating concept and specific procedures for employing the F-16 in the Thunderbirds' role. The 57 WG SYLLABUS USAFADS Combined Thunderbird Pilot Syllabus, details the required training, including the structure of individual training sorties. It supplements this instruction and applies to all USAFADS demonstration pilots and support personnel. Additional supporting documents include the Thunderbird Support Manual and the Thunderbird Standard Operating Procedures.

1.2. Organization. This instruction is critical to Thunderbird operations and contains information pertaining to responsibilities, waivers, pre-season activities, scheduling, officer selection process, as well as responsibilities and requirements for the preparation and conduct of an aerial demonstration. Information includes coordination, pre-show activities and show-site requirements. 57 WG will supplement this ACCI with expanded information on the following areas: mission and en route planning necessary for any USAFADS flight; details on normal/abnormal operating procedures; operational limitations and emergency procedures specific to the F-16; and detailed descriptions of every USAFADS formation and Solo maneuvers. The supplement must also provide critique guidelines and sample grade sheets. (T-2).

1.3. Applicability. This instruction applies to all personnel assigned to the USAFADS. It outlines specific functions, responsibilities, and requirements of members of the USAFADS.

1.4. Waivers.

1.4.1. COMACC is the approving authority for waivers to this ACCI. Thunderbird requests for waivers to this ACCI will be submitted to ACC/A3TA through 57 WG/CC and USAFWC/CC. (T-2). ACC/A3TA will obtain coordination with the applicable HQ agencies and submit the waivers to COMACC, through ACC/A3T and ACC/A3, for approval. HQ ACC agency requests for waivers to this ACCI will be submitted to ACC/A3TA, who will in turn coordinate them with the Thunderbirds, 57 WG/CC, USAFWC/CC and applicable HQ ACC agencies and submit them to COMACC, through ACC/A3T and ACC/A3, for approval.

1.4.2. 57 WG/CC will determine waiver authority for the 57 WG Supplement to this ACCI; however, any Thunderbird requests for waivers or changes to existing waivers to HHQ source documents referenced in the 57 WG Supplement to this ACCI that require HQ ACC or higher approval (i.e., waivers to ACCIs, AFI's, AFMANs, and other HQ directives, etc.) must be submitted through the 57 WG/CC and USAFWC/CC to HQ ACC/A3TV. (T-2). ACC/A3TV will coordinate these requests with ACC/A3TA and then submit them, through ACC/A3T and ACC/A3, to COMACC for approval for waiver requests to ACCIs or to COMACC for approval to submit requests for waivers to AFI, AFMANs, and other HHQ directives to the applicable HHQ OPR for that agency's approval or concurrence, whichever is required. The waiver requests should be submitted via an e-SSS with the specific wording for the waiver they are requesting, along with rationale/justification for the waiver.

1.4.3. ACC/A3TV will request that any waivers be incorporated into the respective ACCI, AFI, AFMAN, etc., as applicable. Waivers will remain in effect unless they are incorporated into the respective source ACCs, AFIs, or AFMANs, in which case they will no longer be waivers. However, future editions of this ACCI or the 57 WG Supplement, whichever is applicable, will note that those waivers have been permanently approved and included in the source document.

1.4.4. If waivers are not included in the applicable source document, they will remain in effect for the period the waiver is granted or until/unless:

1.4.4.1. 30 days after the approving commander's tour length is over.

1.4.4.2. Subsequent departmental or ACC/SUP AFI "rewrite" render the waivers invalid.

1.4.4.3. USAFADS changes MDS.

1.4.4.4. ACC/A3 periodic review or an incident shows cause for reconsideration or rescission.

1.4.5. Any variations or additions to approved waivers must be approved by the appropriate source document OPR and coordinated through the 57 WG/CC, USAFWC/CC, HQ ACC/A3 and COMACC.

1.4.6. Requirements for waivers to local operations (i.e., for Nellis AFB and Creech AFB) will be addressed in the 57 WG Supplement to this ACCI. (T-3).

1.5. Approval Authority. Approval authority for changes to this instruction is COMACC. Approval for waivers to the affected ACCIs is COMACC. Approval for waivers to AFIs, AFMANs and other HHQ source documents will be IAW HAF guidance for the appropriate Tier Level for the waiver in question. Approval authority for all Thunderbird maneuvers and formations is COMACC. Maneuvers not approved by COMACC will not be flown. (T-2).

1.6. Review/Recommended Changes.

1.6.1. A bi-annual review of this instruction will be accomplished following the last show of the Commander/Leader's first complete show season. USAFADS/CC's recommendations/inputs are due to ACC/A3TA by 31 December of the Commander/Leader's first complete show season. ACC/A3TA will combine the USAFADS/CC's inputs with their own and submit all proposed changes to ACC/A3T, 57 WG/CC, USAFWC/CC, and ACC Staff for coordination NLT 31 January of the following year to obtain COMACC approval by 28 February of the same year. During the coordination process, all proposed changes will be provided in a separate listing with supporting rationale. (T-2).

1.6.2. Upon the expiration of existing waivers to any source documents referenced in the 57 WG Supplement to this ACCI for any of the reasons cited above, 57 WG/CC should recommend they be renewed, not renewed or amended and submit their recommendations to ACC/A3TV for processing.

Chapter 2

RESPONSIBILITY AND ORGANIZATION

2.1. COMACC Responsibility.

- 2.1.1. Certify ACCI 11-401 and any changes.
- 2.1.2. Approve the Thunderbird Airshow Schedules and any changes to the schedules that require CSAF approval for submission to CSAF for final approval.
- 2.1.3. Approve changes (date changes, cancellations, and substitutions) to the Thunderbird Show Schedule, IAW AFI 10-1004, Para 2.3.
- 2.1.4. Approve all Thunderbird Maneuvers and Formations. (Note: once approved, they will be incorporated into the 57 WG Supplement to this ACCI).
- 2.1.5. Certify the Thunderbirds to perform their demonstration for the public, prior to the start of the Thunderbird's airshow season. Certification will be accomplished during the Thunderbird's annual COMACC Approval Show.
- 2.1.6. Approve Officer Selection for the Thunderbirds and announce selections via message.
- 2.1.7. Approve ACCI waivers and coordinate on any AFI/AFMAN waiver requests prior to submitting them to HAF for approval.
- 2.1.8. Approve flying in the rear cockpit of a Thunderbird jet during a practice demonstration for individuals not specifically approved in Chapter 4 of this ACCI.
- 2.1.9. Approve Maneuvers at Step-Down Altitudes below 500 feet (i.e., Stage One and Stage Two Parameters).

2.2. USAFWC/CC Responsibility.

- 2.2.1. Submit proposed Thunderbird schedules for the following two years to COMACC through ACC/A3 (Cc: ACC/A3T/A3TA) NLT fifteen duty days prior to requested release date of the schedules. This will give ACC time to staff the package, request waivers from HAF, and prepare the package for COMACC to send to CSAF for approval. **(T-2).**
- 2.2.2. Submit proposed changes to the Thunderbirds annual schedule to COMACC through ACC/A3 (Cc: ACC/A3T/A3TA) as soon as possible. If changes require CSAF approval, ACC will forward them to CSAF. **(T-2).**
- 2.2.3. Submit waiver requests to ACC/A3TV for processing, as per Para 1.4. of this ACCI. **(T-2).**
- 2.2.4. Select officer candidate finalists to send to COMACC for approval. **(T-2).**
- 2.2.5. Coordinate on proposed changes to ACCI 11-401. **(T-2).**
- 2.2.6. Submit proposed changes to Thunderbird formations and maneuvers to COMACC through ACC/A3 (Cc: ACC/A3T/A3TA) NLT thirty duty days before the requested date of COMACC's approval. **(T-2).**

2.3. 57th Wing/CC Responsibility.

- 2.3.1. Coordinate on Thunderbird waiver requests. (T-2).
- 2.3.2. Coordinate on proposed changes to ACCI 11-401. (T-2).
- 2.3.3. Approve 57 WG Supplement to this ACCI and forward a copy to the OPR of this ACCI. (T-2).
- 2.3.4. Coordinate on proposed changes to Thunderbird maneuvers and formations. (T-2).
- 2.3.5. Coordinate on the following two years' proposed airshow schedules. (T-2).
- 2.3.6. Approve the 57 WG SYLLABUS USAFADS Combined Thunderbird Pilot Syllabus. (T-2).
- 2.3.7. Develop selection guidelines for each Thunderbird officer and determine a timeline for the selection process. (T-2).
- 2.3.8. Draft an Application Message for AFPC release specifying all applicant criteria. (T-2).
 - 2.3.8.1. The Application Message must include the requirement for applicants to obtain confirmation from AFPC that they will be released if selected. The Application Message should inform the applicant that: (T-2).
 - 2.3.8.1.1. After receiving the Application Message and deciding to apply for the Thunderbirds, he or she should immediately request the confirmation of release from AFPC. (T-2).
 - 2.3.8.1.2. He or she should include this AFPC confirmation in their application package. (T-2).
 - 2.3.8.1.3. If confirmation from AFPC has not been received within one week of requesting it, the applicant should pursue the status of their request for confirmation of release from AFPC through their chain of command. (T-2).
 - 2.3.8.1.4. If AFPC's confirmation of release has not been received by the suspense date for the application, the applicant should submit his or her application and include a statement as to the status of their request for release from AFPC. As soon as the confirmation of release from AFPC is received, the applicant should forward it to the Thunderbirds. (T-2).
 - 2.3.8.1.5. His or her application will not be approved without final AFPC release. (T-2).
 - 2.3.8.2. Release will consider TOS and DEROS waiver authorities, ranging from O-6 to Secretarial waivers. AFPC assignment teams are committed to providing the maximum number of officers eligible to compete for this prestigious selection; within the constraints of the overall Air Force mission requirements. (T-2).
- 2.3.9. 57 WG Supplement to this ACCI should include selection criteria, guidelines, timelines, example application message and example hire message. (T-2).
- 2.3.10. Draft a Hire Message for COMACC release announcing the officer selections for the next year's team and submit to COMACC through USAFWC/CC . (T-2).

2.3.11. Ensure any Thunderbird Gift-in-Kind requests and other requests requiring legal review with ACC/Staff, AF/JAA and SAF General Council review/approval are coordinated through USAFWC/JA. (T-2).

2.3.12. Upon release of the Thunderbird schedule, ensure frequency requests are submitted through the Nellis AFB Spectrum Management Office, 99 CS/SCOT. (T-2).

2.4. ACC/A3 Responsibility.

2.4.1. Coordinate on Thunderbird requests for waivers requiring COMACC or HAF approval and forward to COMACC or HAF OPR, as applicable, for approval.

2.4.2. Coordinate on ACCI 11-401, ACCI 11-401 57 WG Supplement and changes to either document and forward to COMACC for approval/certification, as required.

2.4.3. Coordinate on Thunderbird schedules and associated changes and forward to COMACC for COMACC approval or for COMACC to forward to CSAF for approval, as applicable.

2.4.4. Coordinate on Thunderbird Maneuvers and Formations included in this ACCI and 57 WG Supplement and forward to COMACC for approval.

2.4.5. Coordinate on requests for Thunderbird National Public Affairs/Media Flights, if required/requested, and forward to applicable approval authority.

2.4.6. Coordinate on any Thunderbird package requiring COMACC or HAF-level approval and forward to COMACC.

2.5. ACC/A3T Responsibility.

2.5.1. Coordinate on Thunderbird requests for waivers requiring COMACC or HAF approval.

2.5.2. Coordinate on ACCI 11-401, ACCI 11-401 57 WG Supplement and changes to either document.

2.5.3. Coordinate on Thunderbird schedules and associated changes.

2.5.4. Coordinate on Thunderbird Maneuvers and Formations included in this ACCI and 57 WG Supplement.

2.5.5. Coordinate on any Thunderbird package requiring A3, COMACC or HAF-level approval.

2.6. ACC/A3TA Responsibility.

2.6.1. Provide coordination on the Thunderbirds' proposed airshow schedule and any proposed changes to it.

2.6.2. Provide coordination on proposed changes to the Thunderbird Support Manual.

2.6.3. Provide staff support for any Thunderbird operational requests.

2.6.4. Review any priority list of airshows (i.e., SAF/PA, MAJCOM, Congressional priorities/interest, etc.) that is submitted to the Thunderbirds for scheduling consideration and provide the Thunderbirds with any issues with these priorities that they need to consider when building their schedule.

2.6.5. During the bi-annual review of this ACCI, solicit recommendations for changes from the Thunderbirds and other applicable ACC agencies, and include their recommendations for coordination/approval. Submit any proposed changes to 57 WG/CC through ACC/A3T for coordination NLT than 60 days prior to before the requested date of COMACC's approval.

2.6.6. Coordinate on any 57 WG proposed changes to ACCI 11-401 57 WG Supplement.

2.6.7. Inform the Red Horse scheduler of which show sites will require a MAAS installed.

2.7. ACC/A3TV Responsibility.

2.7. 1 Coordinate Thunderbird requests for waivers and submit to applicable OPR for approval.

2.7.2. Request applicable waiver OPRs includes the approved waivers for the Thunderbirds into the source document.

2.8. ACC/A4R Responsibility. Validate the Thunderbird's airlift support request and forward it to USTRANSCOM for approval.

2.9. ACC/A6 Responsibility. Process all frequency actions to support USAFADS missions. (Ref AFI 33-580).

2.10. ACC/PA Responsibility.

2.10.1. Provide participation approval for National Media Flights and all Public Affairs non-media flights for the Thunderbirds.

2.10.2. Coordinate with USAFADS/PA and SAF/PA to develop a list of suitable prospects and contacts for national/regional media and appropriately influence non-media flyers.

2.10.3. Support the Thunderbirds in vetting National Media Flyers.

2.10.4. If requested, provide support for the Thunderbirds' website.

2.11. ACC/AOS Responsibility. Provide launch and delivery control of all Thunderbird OCONUS movements (Coronet Missions), as required.

2.12. ACC/JA Responsibility. Ensure USAFWC/JA provides comprehensive legal support and services to USAFADS, as needed. Coordinate with ACC/Staff, AF/JAA and SAF/GC, as required.

2.13. 363 ISR Wing Responsibility. Provide aerial imagery support for each Thunderbird airshow site, IAW Para 3.11 of this ACCI. (T-3).

2.14. USAFADS Commander's Responsibility. The USAFADS Commander/Leader is the commander of the USAFADS and the leader of the USAF Thunderbird team. His responsibilities include the following: (T-2).

2.14.1. Ensure ACC/A3TA also received a copy of any HHQ priority list (i.e., SAF/PA, MAJCOMs, etc. that the team receives, as soon as the team receives it, for ACC/A3TA review.

2.14.2. Submit the following two-years' proposed airshow schedules to ACC/A3TA for review prior to submitting to 57 WG/CC for coordination but NLT 15 Oct for the next year's schedule and NLT 1 Nov for the second year's schedule, IAW Chapter 3 of this ACCI.

2.14.3. Notify ACC/A3TA of any requirements for airshows to install a Mobile Aircraft Arresting System (MAAS), immediately after becoming aware of the requirement.

2.14.4. Review and update the Thunderbirds Support Manual for the following year and submit a draft copy, with changes highlighted/annotated, to ACC/A3TA for review NLT 1 Nov.

2.14.5. Coordinate with 363 ISR Wing at Joint Base Langley-Eustis for aerial imagery requirements and provide 363 ISR Wing with estimated show center coordinates for each show site, as per Chapter 3 of this ACCI.

2.14.6. Submit airlift support requests to ACC/A4R after demonstration commitments are established.

2.14.7. Submit refueling requests to 618/AOC after demonstration commitments are established.

2.14.8. Submit requests for Coronet Missions to ACC/AOS as soon as possible after the Thunderbirds are approved for an overseas deployment.

2.14.9. Notify ACC/PA of all potential media/Hometown Hero flights prior to USAFWC/CC approval to allow ACC/PA to make recommendations or provide inputs to potential fliers.

2.14.10. Request ACC/PA participation approval for National Media Flights and all Public Affairs non-media flights for the Thunderbirds, prior to USAFWC/CC approving Thunderbird participation.

2.15. Individual Responsibility. The USAFADS/CC and 57 WG/CC will determine the individual responsibilities for members of the USAFADS. (T-3).

2.16. Show Operations. All USAFADS authorized demonstration maneuvers, aerobatics, and formations will be described in the supplement to this instruction. They will be performed in one of four types of show operations (High, Low, or Flat demonstrations or Fly-bys). (T-2).

2.16.1. Official Demonstration. An official demonstration is a COMACC coordinated and a CSAF and Secretary of the Air Force/Public Affairs approved and scheduled demonstration. Demonstrations consist of all or parts (weather dependent) of either the High, Low, or Flat show sequences, plus narration, performed primarily for an audience.

2.16.2. Practice Demonstration. A practice demonstration consists of all or parts of the High, Low, or Flat demonstration sequence performed to enhance team proficiency. A practice demonstration is not advertised nor intended for general public appearance. However, a practice demonstration may be performed for a specific closed/restricted audience. Practice demonstrations will comply with all the provisions in this instruction/supplement that apply to approved demonstrations.

2.16.3. Fly-bys (Fly-overs). USAFADS-assigned aircraft will not normally be used to support fly-bys or static display requests. Exceptions to this policy require SAF/PA coordination and CSAF approval, unless CSAF has delegated otherwise. The coordination process will be identical to the process used to obtain approval for the annual two-year schedule. Examples of appropriate flyovers may include the Super Bowl, the Daytona 500, or other significant events with extensive exposure for the USAF.

2.17. Authorized Maneuvers. Only COMACC-approved maneuvers, aerobatics, and formations are authorized. Additions or revisions will be submitted in the same format used in this instruction/57 WG Supplement, and will include as a minimum: (T-2).

2.17.1. Proposed narrative description.

2.17.2. Parameters for Stage One and Stage Two entry, exit, 90°, 180°, 270° (as appropriate for the maneuver).

2.17.3. Target Airspeed, Target Altitude, Target G with appropriate power settings.

2.17.4. Formation position specific maneuver descriptions.

2.17.5. Abnormal Procedures to include specific abort procedures by formation members.

2.17.6. Radio calls and appropriate communications procedures.

2.17.7. Rules and considerations specific to a particular show site.

2.18. Squadron Organization. The USAFADS has five broad organizational areas: operations, maintenance, logistics, public affairs, and administration.

2.19. Assigned Officer Designations. The Thunderbird officers have the following numerical designations: Commander/Leader (#1), Left Wing (#2), Right Wing (#3), Slot (#4), Lead Solo (#5), Opposing Solo (#6), Operations Officer (#7), Advance Pilot/Narrator (#8), Flight Surgeon (#9), Executive Officer (#10), Maintenance Officer (#11), and Public Affairs Officer (#12). Refer to the 57 WG Supplement to this ACCI for additional call signs and assignment of aircraft numerical designations.

2.20. Squadron Responsibilities. Refer to the 57 WG Supplement to this ACCI.

2.21. Additional Specific Authority Granted to the Thunderbird Commander/Leader. Additional Specific Authority granted to the Thunderbird Commander/Leader will be determined by 57 WG/CC. (T-3).

Chapter 3

PRESEASON ACTIVITIES

3.1. References. Detailed training guides for Thunderbird Operations are outlined in The Combined Thunderbird Pilot Syllabus. This chapter covers general guidelines for conducting that training.

3.2. F-16 Upgrade Training. Pilots who are new to the ADS and not qualified in the F-16 will receive a full transition checkout at an F-16 training wing, to include an instrument qualification check, and the course-stipulated hours of academics and emergency procedures training. (T-2).

3.3. Training Season. The period from mid-November to mid-March is set aside for training new pilots. Second-year pilots will be designated in writing by the USAFADS/CC to act as instructors/supervisors for first year pilots and are authorized to instruct all applicable maneuvers from both chase and rear cockpit positions. Public demonstrations will not be scheduled during this period. The Team may schedule flybys at appropriate events with CSAF approval, unless approval has been delegated otherwise. If there is an especially large turnover of demonstration pilots, the training season may be extended. (T-3).

3.4. Training Guidelines. The following guidelines apply to all USAFADS training flights and aerobatic maneuvers accomplished at Nellis AFB before proceeding to the range (Diamond Loop on Takeoff, Split S, etc.).

3.4.1. A step-down altitude program will be used throughout the training season to ensure flight safety remains the highest priority. 57 WG/CC approval is required for step-downs to 4,000 feet AGL, 2,000 feet AGL, 1,000 feet AGL and 500 feet AGL (for general or specific maneuvers). The 57 WG/CC also approves 500 feet AGL and 300 feet AGL step-downs for the Thunderbird Pitch. COMACC, however, is the approval authority for performing demonstration maneuvers at step-downs below 500 feet AGL. Normal progression will result in the Delta formation flying at stage 1 minimums NLT the COMACC acceptance/approval show. Refer to the Combined Thunderbird Pilot Syllabus for the step-down schedule. Target and minimum altitude parameters are defined in maneuver tables in the 57 WG Supplement to this ACCI for the various maneuvers. (T-2).

3.4.2. The 57 WG/CC is responsible for developing additional training guidelines and including them in the 57 WG Supplement to this ACCI. (T-3).

3.5. Demonstration Scheduling Policies. The demonstration season normally begins mid-March and extends to mid-November. The following policies will guide development of the Thunderbird demonstration schedule to maximize mission impact, maintain peak proficiency and provide adequate team rest: (T-2).

3.5.1. The Thunderbirds will ensure ACC/A3TA receives copies of any priority list (i.e., SAF/PA, MAJCOM, Congressional interests, etc.) that they received, as soon as they receive it, for ACC/A3TA review. ACC/A3TA will, in turn, notify the Thunderbirds of any issues they see with the priorities, for Thunderbird consideration when building the schedule.

3.5.2. When building their draft schedule, the Thunderbirds will confer with the Blue Angels and also request/review any ACC single-ship demonstration team after-action-reports or show critiques regarding any shows the Thunderbirds are planning to support that they have

never visited or have not visited in the past five years. The airshow will not be scheduled, if significant and/or insurmountable issues are revealed that will have an impact on the Thunderbirds' ability to support that airshow.

3.5.3. When building the schedule and coordinating with individual airshows, the Thunderbirds will determine if the show site will need to install a MAAS, and if so, ensure the airshow is aware of that requirement and can comply, before putting the show on the schedule.

3.5.4. Attach a list to the proposed schedule, of each show site that will require the installation of a MAAS. Also annotate if 57 WG/CC waived that requirement and the rationale for the waiver.

3.5.5. No more than one official demonstration per day will be performed.

3.5.6. No more than three official demonstrations will be scheduled in any 4-day period; no more than five official demonstrations will be scheduled in any 7-day period.

3.5.7. The squadron will schedule two mandatory six-day breaks to allow the team to rest and take leave. The first break will be centered on the Easter Weekend, and is designed to provide a rest period following training season. The second break will be scheduled sometime between mid-July and mid-August to provide the squadron a "mid-season" rest period.

3.5.8. Fly/Show (Show-Fly) Restrictions.

3.5.8.1. No more than six fly-show (show-fly) demonstrations will be scheduled during a single show season.

3.5.8.2. To the max extent possible, fly-show (show-fly) demonstrations will not be scheduled on consecutive weekends.

3.5.8.3. To the max extent possible, consecutive day show sites must not be separated by more than 500 miles.

3.5.8.4. The show at the second day show site must not begin before 1400 hours to allow maintenance crews adequate time for crew rest, aircraft maintenance/preflight, etc.

3.5.9. Official demonstrations normally will be scheduled to commence not later than two hours prior to official sunset and will, in all cases, be completed in time so that all aircraft land one hour prior to official sunset. Note: The purpose of this policy is to schedule demonstrations at times when the sun angle is the best (high), visibility restrictions due to low sun combined with haze are at a minimum, and late afternoon bird activity has not yet started. Due to a combination of runway orientation and/or sun angle associated with daylight savings time changes, some October and November shows may need to be scheduled earlier. Conversely, during the mid-summer, many Mideast and Midwest shows could be flown later and still avoid the above mentioned problems.

3.5.10. USAFADS/CC will submit the proposed two-year schedule to ACC/A3TA for review/coordination prior to submitting to 57 WG/CC for coordination, but NLT 15 Oct for the next year's schedule and NLT 1 Nov for the second year's schedule. This will give ACC/A3TA an opportunity to review the proposed schedules, identify any issues they may be aware of with any proposed shows, identify any waivers that will be required, identify

potential disconnects in priorities, and allow the Thunderbirds to make changes, if necessary, before they send the proposed schedules forward for coordination and approval.

3.5.10.1. When submitting the proposed schedule to ACC/A3TA for coordination, include the SAF/PA list of all events that requested Thunderbird support, a list of all MAJCOMs' priorities, a list of SAF/PA priorities, and a copy of the Blue Angels proposed schedule for the next two years.

3.5.10.2. When submitting the proposed schedule to ACC/A3TA for coordination, include a list of known HHQ scheduling waivers (i.e., within 150 NM of a Blue Angel show, second appearance in same geographical area, etc.) that will be required and a list of locations that will require the installation of a MAAS, if known at the time.

3.5.11. Coordinate proposed changes to the Thunderbird schedule with ACC/A3TA as soon as possible.

3.6. Runway Requirement. Minimum required runway length is 6,500 feet of usable runway surface. Runway length less than 7,000 feet requires a cable on the operating runway.

3.7. Site Surveys. After the two-year schedule is approved, the Thunderbirds will develop a site survey schedule and conduct site surveys for all show sites with potential logistical/FAA constraints, undergoing significant construction about the aerodrome, or with runways less than 7,000 feet in length, will be checked via a ground safety survey as early in the training season as practical. Sites which have never been visited or have not been visited within the last five show seasons will also be surveyed. The check will consist of a ground survey of taxiways, runways, overruns, ramp space, and local obstructions. Special consideration will be given to foreign object damage (FOD) potential. If this survey reveals insurmountable logistics/FAA problems, any potential airfield hazards and/or an alternate satisfactory base of operations is not available, the airshow will be canceled. Additional guidance may be supplemented, as required. (T-2).

3.8. Aerobatic Box Review. Prior to the site survey, the Thunderbirds will review the aerobatic box layout of each show site that requires a site survey to identify potential issues that could prohibit them from performing at that show site or issues that need to be corrected before they can perform at that show site. (T-2).

3.9. Demonstrations at Other than Airfields. A thorough analysis of the show site is required prior to any demonstration that will be performed overwater (i.e. Chicago, Illinois; Cleveland, Ohio; etc.) and for off-airfield demonstrations where a runway will not be available to provide a distinct show reference line (i.e. AF Academy; Cheyenne, WY). Guidance regarding the analysis non-airfield demonstrations sites will be supplemented, as required.

3.10. Arresting Gear Support. Regardless of runway length, there must be an arresting gear on a runway suitable for F-16 operations within 80 NM of the runway that the Thunderbirds will be operating on; otherwise the show must install a MAAS on a runway suitable for F-16 employment within 80 NM of the runway the Thunderbirds will be operating on.

3.10.1. The Thunderbirds should inform the airshow director of the following or provide this information in their Support Manual:

3.10.1.1. This is a safety requirement which the show site will be required to fund.

3.10.1.2. Requirements/instructions for making an arresting gear request are contained in AFI 32-1043, (Managing Aircraft Arresting Systems), ACC Supplement, Attachment 7.

Included in the attachment is information concerning the costs associated with the installation of the MAAS. Military organizations must provide a fund citation. Civilian organizations will need to contact the individual installation team (AF Red Horse Squadron or Marine Expeditionary Unit) to coordinate funding.

3.10.1.3. Show sites should coordinate with local FAA and airport management, as certain types of temporary arrestment equipment may affect civil and commercial operations.

3.10.1.4. Arresting gear may be activated from the tower or manually positioned. If they are manually positioned, they must be in place before all scheduled Thunderbird practices and demonstrations.

3.10.1.5. Airshows should find a hook-equipped aircraft unit to certify the MAAS prior to the Thunderbirds' arrival.

3.10.2. While building their schedule, the Thunderbirds should determine which show sites will need to have a MAAS installed for their show and for which of those show sites the 57 WG/CC will waive the requirement—this must be reflected on their schedule when they submit it. The Thunderbirds will coordinate with the individual sites to ensure compliance. If, during a later site survey or due to other developments, other shows are identified as requiring a MAAS, the Thunderbirds, through 57 WG/CC, must notify ACC/A3TA of the requirement. (T-2).

3.10.3. If the airshow is unable to find a volunteer to certify the arresting gear, the gear will be certified by a Thunderbird aircraft upon arrival at the show site, or the Thunderbirds will request, via a memo for record, that the 57 WG/CC waive the requirement to have the arresting gear certified. (T-2).

3.11. Aerial Imagery Support. Aerial imagery is required to facilitate demonstration planning of show and crowd lines, show center position, and reference points for timing and initiation of maneuvers within the aerobatic area. The Thunderbirds normally meet their Aerial Imagery requirements for CONUS airshows locally through an online method. However, should the online system fail or not be available, they can request support from the 363 ISR Wing at Joint Base Langley-Eustis, Virginia. They will need to provide the 363rd with the coordinates of approximate show center of each show site NOT LATER THAN 60 days prior to the event. For show sites located outside CONUS, the USAFADS will require 363 ISR Wing support. When they request support, they must provide the 363rd with coordinates for the estimated show center of each site as soon as possible after the proposed OCONUS show sites are approved by CSAF. Additional imagery requirements will be supplemented, as required and requested. (T-3).

3.12. Airlift Support. Airlift support is required for transportation of USAFADS support personnel and equipment to and from demonstration show sites. Support is requested from HQ ACC/A4T by USAFADS/DO after demonstration commitments have been established. ACC/A4T validates the request and it is routed to USTRANSCOM, and finally to TACC, where the airlift is given a mission number. TACC then tasks the appropriate unit.

3.13. Air Refueling Support. The Thunderbirds should request support from 618 AOC, after demonstration commitments are established, by providing the following: refueling track, ARCT, number of aircraft, offload.

3.14. Support Manual. Detailed information on pre-show coordination requirements is contained in the Thunderbird Support Manual. This manual is reviewed and updated annually at the end of each show season by the USAFADS. The revised draft will be submitted to ACC/A3TA, with changes highlighted/annotated, for review/coordination NLT 1 November. ACC/A3TA will provide coordination and recommendations NLT 15 November. The Support Manual will be approved by the Thunderbird Commander/Leader and released in conjunction with annual International Council of Air Shows Convention. The intent is to ensure changes to the Support Manual have been coordinated with ACC and approved by the Thunderbird Commander prior to announcing these changes to the public at the ICAS Convention. This manual will be provided to all airshow coordinators of requesting it. (T-2).

3.15. Thunderbird Officer Selection Process. Thunderbird officers will normally serve two-year tours. COMACC may approve a one-year extension for unique circumstances. (T-2).

3.15.1. Selection Criteria: The Thunderbirds, in conjunction with 57 WG/CC and USAFWC/CC, will establish applicant qualification criteria for the following officer positions:

- 3.15.1.1. Commander/Leader.
- 3.15.1.2. Demonstration Pilots.
- 3.15.1.3. Operations Officer.
- 3.15.1.4. Advanced Pilot/Narrator.
- 3.15.1.5. Flight Surgeon.
- 3.15.1.6. Executive Officer.
- 3.15.1.7. Maintenance Officer.
- 3.15.1.8. Public Affairs Officer.

3.15.2. Selection Guidelines. Refer to the 57 WG Supplement to this ACCI for selection criteria, guidelines, timelines, example application message and example hire message.

3.16. Selection Process Timeline. Refer to the 57 WG Supplement to this ACCI for a timeline for the selection process that will ensure finalists are approved and announced by COMACC NLT 31 May, to allow selectees time to attend the F-16 Transition Course, if required, and meet a RNLTD of 1 Oct, unless RNLTD is waived by the USAFADS Commander/Leader.

3.17. Example Application Message. Refer to the 57 WG Supplement to this ACCI for a sample application message that will specify the applicant criteria for each position, to include the guidance in Para 3.15.2. of this ACCI.

3.18. Example Hire Message. Refer to the 57 WG Supplement to this ACCI for a sample hire message that will specify the applicant criteria for each position.

Chapter 4

OPERATIONS AND COORDINATION

4.1. Responsibilities. The Thunderbird Commander/Leader is responsible for mission planning. This responsibility is normally delegated to one or more team members. All USAFADS team members will be capable of accomplishing all facets of the flight planning process. Refer to the 57 WG Supplement to this ACCI for specific responsibilities of team members. (T-2).

4.2. Briefing and Debriefing Requirements. Refer to the 57 WG Supplement to this ACCI for briefing and debriefing requirements.

4.3. Range Safety Officer (RSO) Qualifications. Refer to the 57 WG Supplement to this ACCI for RSO qualifications.

4.4. Occupancy of Rear Cockpit. The rear cockpit must not be occupied during any official demonstration. USAFWC/CC/CV, 57 WG/CC/CV, and Thunderbird 1-12 may occupy the rear cockpit during transit flights or practice demonstrations. Potential new team members and 57 WG fighter qualified aircrew may occupy the rear cockpit during a practice demonstration, with approval of the 57 WG/CC. Any other individual flying in a rear cockpit during a practice demonstration requires COMACC approval. (T-2).

4.4.1. Thunderbird photographers may occupy the rear cockpit for specific Thunderbird photo missions (either practice demonstration or transit flights). The USAFADS/CC must notify the 57 WG/CC prior to the photo mission. Designated Thunderbird crew chiefs may occupy the rear cockpit in transit to show sites for the fulfillment of advance duties.

4.4.2. Personnel flying in Thunderbird aircraft, other than those listed above in this instruction, will be coordinated for approval IAW AFI 11-401, ACC SUP 1 (Aviation Management). Maneuvers flown during DV/PA orientation flights must be IAW approved USAF/ACC aerobatic guidance. In all cases, a thorough crew/cockpit responsibilities briefing and egress training will be conducted for each flight.

4.5. Functional Check Flights. Functional check flights (FCF) will be accomplished by qualified pilots designated by letter or certification. FCF procedures as specified in TO 1F-16C-6CF-1 and AFI 11-202 Vol 3 (Flying Operations - General Flight Rules) will be followed. Show maneuvers will not be flown during FCFs. All ACC instructions applicable to FCFs apply. Weather minimums will be IAW TO 1-1-300 (FCF Procedures) and AFI 11-202 Vol 3. (T-2).

4.6. Civilian and Civic Leader Public Affairs/Media Flights. Thunderbird requests for National and International Media Flights must be submitted to ACC/PA, as soon as possible after the individual(s) have been identified for the flight. ACC/PA will staff the request for participation approval prior to the Thunderbirds submitting the request to USAFWC/CC for approval for them to participate. Guidance for these flights is found in AFI 35-103. USAFWC/CC is the approving authority for all other Thunderbird Public Affairs/Media Flights. USAFADS/CC will notify ACC/PA of all of these other flights prior to USAFWC/CC approval to allow ACC/PA to make recommendations or provide inputs to potential flyers. (T-2).

4.7. Gift-In-Kind Requests and Other Legal Issues/Reviews. USAFWC/JA will submit Thunderbird requests for Gift-In-Kind and other requests requiring HHQ legal review to ACC/JA NLT 30 days before requested approval date.

4.8. Command Post Coordination. 57 WG/CC will develop coordination procedures between the Thunderbirds and the Nellis AFB Command Post. (T-3).

Chapter 5

SHOW SITE ACTIVITY

5.1. General. The Thunderbird Advance Pilot/Narrator or Operations Officer normally will precede the Demonstration Team so as to arrive at least 4 hours prior to the team. The purpose of this early arrival is to act as the Thunderbird Commander/Leader's representative in finalizing all demonstration show arrangements, show site commitments, and to ensure adequacy of support resources and facilities previously arranged by USAFADS/DO/MA/PA/CCQ. Refer to the 57 WG Supplement to this ACCI for details on Thunderbird show site activity before, during and after the arrival of the team/jets (i.e., coordination of Crash Rescue, Security, Air Traffic Control, arrival of jets and aerial survey, etc.). (T-3).

5.2. Debriefing General. All flights will be thoroughly debriefed. (T-2).

5.3. Post Demonstration Report. After the debrief of an officially scheduled flight demonstration, the Commander/Leader (or designated representative) will contact the 57 WG/CC or the 57 WG/CC's designated representative to provide a post demonstration report. This report will be sent to the Nellis Command Post and Cc ACC Command Post and ACC/A3TA. See Attachment 2 for a sample report. The report will include, as a minimum: (T-2).

- 5.3.1. Type of show flown
- 5.3.2. Estimated attendance
- 5.3.3. Significant incidents/unusual circumstances
- 5.3.4. Distinguished visitors
- 5.3.5. Scoring summary
- 5.3.6. Weather conditions
- 5.3.7. Media Flight Results

Chapter 6

OPERATIONAL LIMITATIONS:

6.1. General. The purpose of this chapter is to delineate the operational limitations specific to the USAFADS. The goal is a professional flying program which pays maximum attention to safety and to orderly operational procedures.

6.2. Video Requirements. The USAFADS will have dedicated cameras, video recorders, and monitors, etc., to support all events. All aerobatic flights of any kind conducted below 2,000 feet AGL will be recorded. If video equipment is not available or becomes inoperative during a mission, aerobatic flight below 2,000 feet can only continue with 57 WG/CC approval. (T-2)

6.3. Video Handling. Refer to the 57 WG Supplement to this ACCI for procedures for handling video equipment.

6.4. USAFADS F-16 Features. The Thunderbird F-16s will be modified with the features necessary to the performance of a professional air demonstration. Specific modifications will be coordinated with ACC/A4. Current modifications include: (T-2).

6.4.1. Smoke Switch. There are two switches; one that arms the system and a second to dispense smoke. The Arm switch is mounted on the right console; the Dogfight/Missile Override switch on the throttle can then be positioned to dispense smoke.

6.4.2. Stopwatch. A standard stopwatch is attached to the glare shield. The stopwatch is necessary because many maneuvers, particularly Solo maneuvers, are based upon timing and depend on an accurate time hack. The stopwatch is mounted to the left side of the glare shield.

6.4.3. Rear View Mirrors. Mirrors can be installed on the towel racks on the left and right side of the cockpit (optional).

6.5. Ground Operating Procedures. Refer to the 57 WG Supplement to this ACCI for procedures for ground operations.

6.6. Takeoffs. All takeoffs will be performed IAW AFI/ACC guidance, except as provided/described in this ACCI. All formation takeoffs must comply with the following restrictions: (T-2).

6.6.1. Maximum of two aircraft if the runway is less than 125 feet wide, but at least 100 feet wide.

6.6.2. Single-ship only on runways less than 100 feet wide.

6.6.3. Three or more aircraft require a runway FOD check (para 6.5.1. above)

6.6.4. Maximum crosswind component is 15 knots

6.6.5. Maximum tail wind component is dependent on Takeoff and Landing Data

6.7. Maneuvers. Each year the USAFADS team will perform an approved sequence of maneuvers. The final show sequence will be approved by COMACC and the most current sequence will be maintained by the USAFADS/DO. The USAFADS team will not perform or practice any aerobatic maneuvers not on the approved list. The maximum number of aircraft in

formation aerobatics is six. **Note:** Any proposed new maneuvers must be approved in writing in advance by COMACC, before any type of in-flight experimentation, practice, or performance takes place. (T-2).

6.8. Pilot Flight Authorization. Only the trained Diamond pilots and two Solo pilots will fly demonstration aerobatics. The Advance Pilot/Narrator and Operations Officer will not perform low altitude Thunderbird aerobatic maneuvers of any kind. The Thunderbird pitch-up to landing is authorized, as long as they are trained, documented, and current to perform the maneuver. It is not an authorized maneuver when flying incentive/DV/Public Affairs orientation flights. When flying incentive/DV/Public Affairs orientation flights, the Operations Officer and narrator will follow normal USAF and ACC guidance for F-16 operations and aerobatic maneuvers. (T-2).

6.9. Maximum Speed. The maximum speed during any aerial demonstration is .94M. (T-2).

6.10. Roll in the Vertical. Refer to the 57 WG Supplement to this ACCI for procedures for all team maneuvers that require a roll in the vertical.

6.11. Aircraft and Safety Guidelines.

6.11.1. General. A ground Safety Observer must be present for all demonstrations. (T-2).

6.11.2. Weather Minimums for the Three Types of Demonstrations. These weather minimums will not be waived, except as provided in the Flat Show. (T-2).

6.11.2.1. High Show Minimums. Ceiling must be at or above 8,000 feet AGL and 5NM and remain so throughout the demonstration. (T-2).

6.11.2.2. Low Show Minimums. Ceiling must be at or above 3,500 feet AGL and 5NM and remain so throughout the demonstration. (T-2).

6.11.2.3. Flat Show Minimums. Ceiling must be at or above 2,000 feet AGL and 5NM and remain so throughout the demonstration. When the weather ceiling for the Flat Show is observed to be less than 2,000 feet AGL, but at or above 1,500 feet AGL, and forecast to remain so throughout the demonstration period, a waiver down to the 1,500 foot ceiling level may be granted by the 57 WG/CC or USAFWC/CC after being fully briefed on the circumstances involved and the actual and forecast weather situation. The 5NM visibility requirement will not be waived. (T-2).

6.11.2.4. Transitions. At his discretion, should the weather conditions change during the demonstration, the Commander/Leader may transition the demonstration sequence between show types, as dictated by the weather. The demonstration pilots, Safety Observer and the Narrator will acknowledge the change of the show sequence. (T-2).

6.12. Formations and Maneuvers. Only those formations and maneuvers described in this ACCI and supplemented by 57 WG will be flown. (T-2).

6.13. Radio Terminology. USAFADS pilots will use standardized radio calls. The 57 WG/CC will define radio calls for training season, en route flying, and arrival maneuvers in Chapter 7 of this ACCI. Refer to the 57 WG Supplement to this ACCI for specific radio calls for each phase of each maneuver in the show sequence (Chapters 10 and 11, as applicable). (T-2).

6.14. Landings. All USAFADS demonstration pilots will use a standardized sequence for pitch-up to landing. Refer to the 57 WG Supplement to this ACCI for additional landing

guidelines. (T-2).

6.15. USAFADS Bird Hazard Procedures. Refer to the 57 WG Supplement to this ACCI for bird hazard procedures.

Chapter 7

RADIO CALLS

7.1. Introduction. This chapter details the radio calls used by the USAFADS. It is designed to give a broad overview. Refer to the 57 WG Supplement to this ACCI for a broad overview of radio calls. Refer to Chapters 10 and 11 of the 57 WG Supplement to this ACCI for specific details of radio calls during maneuvers.

7.2. Use of UHF and VHF Radios. The USAFADS have two UHF and one VHF frequency assignments dedicated for their exclusive use throughout the United States and its possessions. HQ AF/A6CF will process temporary requests for additional frequencies submitted by the requesting unit, IAW AFI 33-580.

Chapter 8

ABORTS/ABNORMAL/EMERGENCY PROCEDURES

8.1. Aborts/Abnormal/Emergency Procedures. Refer to the 57 WG Supplement to this ACCI for details for all abort, abnormal, and emergency procedures to be used by the Thunderbirds.

Chapter 9

FORMATION REFERENCES

9.1. Formation References. Refer to the 57 WG Supplement to this ACCI for formation references for all the formations used by the Thunderbirds. The references detailed in the Supplement should include diagrams, photos, spacing, and sight picture, as applicable.

Chapter 10

DEMONSTRATION MANEUVERS

10.1. General. Refer to the 57 WG Supplement to this ACCI for all Thunderbird Demonstration Maneuvers. All the maneuvers certified by COMACC are approved and authorized for use during the training season and in Thunderbird air demonstrations. Maneuvers in the show sequence capitalize on basic and proven formations. In the 57 WG Supplement, each maneuver will be classified by category (formation rolls, formation loops, and special maneuvers) and discussed in detail. (T-2).

10.2. Specific Parameters. Each maneuver will be described in the 57 WG Supplement to this ACCI from the perspective of the Commander/Leader and includes Wingmen, Slot, and Solo techniques and procedures where applicable. Individual and Solo maneuvers will be covered separately in Chapter 11 (57 WG Supplement to this ACCI). Note that COMACC approval is required before any Stage One or Stage Two parameters, to be defined in the 57 WG Supplement, are adopted, except for the Thunderbird Pitch, which only requires 57 WG/CC approval. A table showing minimum altitudes for each maneuver for Stage One and Stage Two must be included in the Supplement. (T-2). **Note:** All altitudes in the Supplement for each maneuver will be listed as above ground level (AGL).

Chapter 11

SOLO INDIVIDUAL, OPPOSING AND DUAL DEMONSTRATION TECHNIQUES

11.1. Solo Individual, Opposing and Dual Demonstration Techniques. Refer to the 57 WG Supplement to this ACCI for a description of the techniques the Left Solo and Right Solo should use to perform each of the USAFADS aerobatic maneuvers that are performed individually and in an element of two. Solo demonstration techniques for maneuvers that are performed with the Diamond are contained in Chapter 10.

HERBERT J. CARLISLE, General, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

57 WG SYLLABUS, USAFADS Combined Thunderbird Syllabus, 1 September 2015
AFI 10-1004, Conducting Air Force Open Houses, 18 February 2010
AFI 11-202 Vol 3, Flying Operations- General Flight Rules, 7 November 2014
AFI 11-401, Aviation Management, 10 December 2010
AFI 11-401, ACC Supplement 1, Aviation Management, 25 Mar 2013
AFI 32-1043, Managing, Operating, and Maintaining Aircraft Arresting Systems, 4 March 2015
AFI 33-580, Spectrum Management, 24 December 2015
AFI 35-103, Public Affairs Travel, 26 Jan 2010
AFPD 11-4, Aviation Service, 1 September 2014
TO 1F-16C-6CF-1, Acceptance and Functional Check Flight Procedures Manual USAF Series Aircraft F-16C/D, 1 September 2014
TO 1-1-300, Technical Manual, Maintenance Operational Checks and Check Flights, 15 March 2012

Abbreviations and Acronyms

ACC—Air Combat Command
ACCI—Air Combat Command Instruction
AFH—Air Force Handbook
AFI—Air Force Instruction
AFMAN—Air Force Manual
AFPC—Air Force Personnel Center
AFPD— Air Force Policy Directive
ANG—Air National Guard
AOC—Air Operations Center
AOS—Air Operations Squadron
ARCT—Air Refueling Control Time
CC—Commander
COMACC—Commander of Air Combat Command
CSAF—Chief of Staff (United States) Air Force
CONUS—Continental United States

DV—Distinguished Visitor

DEROS—Date Eligible for Return From Overseas

e-Publishing—the e-Publishing web site www.e-publishing.af.mil

e-SSS—Electronic Staff Summary Sheet

FAA—Federal Aviation Administration

FCF—Functional Check Flight

FOD—Foreign Object Damage

HAF—Headquarters Air Force, includes the Secretariat and the Air Staff

HHQ—Higher Headquarters

IAW—In Accordance With

ICAS—International Council of Air Shows

JA—Judge Advocate

MAAS—Mobile Aircraft Arresting System

MAJCOM—Major Command

MDS—Mission Design Series

OCONUS—Outside the Continental United States

OPR—Office of Primary Responsibility

PA—Public Affairs

RNLTD—Report Not Later Than Date

RSO—Range Safety Officer

SAF—Secretary of the Air Force

SAF/GC—Secretary of the Air Force General Council

SAF/PA—Secretary of the Air Force Public Affairs

TACC—Tactical Air Control Center

TOS—Time On Station

UHF—Ultra High Frequency (Range)

USAFADS—United States Air Force Aerial Demonstration Squadron

USAFR—United States Air Force Reserve

USAFWC—United States Air Force Warfare Center

USTRANSCOM—United States Transportation Command

VHF—Very High Frequency (Range)

Terms

Aerobatic Box—The airspace (laterally and vertically) at an airshow where aerobatic flight is authorized.

Blue Angels—The United States Navy Aerial Demonstration Team.

COMACC Approval Show—An annual USAFADS (Thunderbirds) Demonstration flown for the purpose of having the Commander of Air Combat Command certify the Thunderbird's performance prior to the start of the Thunderbird's air show season.

Coronet Mission—A specialized mission to allow fighters to traverse long distances (normally over water) safely when the fighters do not have enough fuel to traverse the distance without air refueling support, often refueling numerous times before reaching their destination.

Delta Formation—The Thunderbird's standard 6-aircraft formation used for flyovers (fly-bys) and during their airshow demonstration.

e- Publishing—Central web site for accessing, viewing, downloading or ordering physical and electronic products processed by AFDPO. Information on product development and links to other agency publications are also provided on the e-Publishing web site (www.e-publishing.af.mil).

Fly-Show—The term used to describe when the Thunderbirds fly from one show site (after performing there the day before) to another show site and fly a show at the new location on the same day—the opposite of a Show-Fly.

Headquarters Air Force (HAF)—The HAF is comprised of both Secretariat and Air Staff offices.

Hometown Hero Flights—Backseat F-16D flights provided to a local hero at an airshow.

ICAS Convention—The International Council of Air Shows annual convention for air show performers and air show directors. The primary purpose is for air shows to hire performers to perform at their upcoming air shows. The convention also provides a venue for dispersing/sharing pertinent information to air shows and performers for the upcoming air show season.

Marine Expeditionary Unit—The Marine version of the Air Force Red Horse Squadron—they install mobile aircraft arresting systems at air show.

Office of Primary Responsibility (OPR)—The originating office for a publication; the author of the publication is an individual within the OPR. OPRs are solely responsible for the accuracy, currency, and integrity of their publications and forms.

Red Horse Squadron—An Air Force or Air National Guard Civil Engineering squadron that installs mobile aircraft arresting systems on runways that do not have a permanent arresting gear system on site or within 80 NM of show site.

Show--Fly--The term used to describe when the Thunderbirds perform a show at one location and after the show fly to a new location to perform at the next day.

Step-Down Altitude Program—A program designed to allow the Thunderbirds to gradually step down to lower altitudes as they gain more proficiency in flying their air show aerobatic routine profile.

Thunderbirds—The United States Air Force Aerial Demonstration Team

Thunderbird Application Message—An annual message released by the Thunderbirds requesting applications from qualified officers interested in becoming a Thunderbird.

Thunderbird Support Manual—A manual developed by the Thunderbirds that lays out all the support requirements (lodging, rental cars, maintenance, logistical, operational, security, public affairs, and others) that need to be met by an airshow that will be hosting the Thunderbirds during the year.

Attachment 2

EVALUATING / SCORING AIR DEMONSTRATIONS AND POST DEMONSTRATION SUMMARY REPORT**Figure 2.1. Evaluating / Scoring Air Demonstrations and Post Demonstration Summary Report****EVALUATING / SCORING AIR DEMONSTRATIONS AND POST DEMONSTRATION SUMMARY REPORT**

A2.1. Evaluating/Scoring Air Demonstrations. The 57 WG will develop guidelines for evaluating and scoring their aerial demonstration, to include grading criteria and grade sheet templates. These guidelines will create a starting point from which to establish a baseline and provide consistency in grading each maneuver and the overall demonstration. See below for an ACCI Post-Demonstration Summary Report Sample that the Thunderbirds will use to report the daily results of their shows, including the overall score of the demonstration. (T-2).

A2.2. Post-Demonstration Summary Report Sample. The Thunderbirds will submit a Post-Demonstration Report to the Nellis Command Post and forward a copy to ACC/A3TA. Nellis Command Post will in turn submit the report to the ACC Command Post. A template for the report is provided below: (T-2).

- A. (Type of show flown) High
- B. (Estimated attendance) 150,000
- C. (Significant incidents/unusual circumstances) Birdstrike #4 on High BB
- D. (Distinguished visitors) Lt Gen John Doe
- E. (Scoring summary) 2
- F. (Weather conditions) 250 SCT, Vis 10+
- G. (Media flight results) Ch. 5 News reporter and Hometown Hero flown without incident; excellent media coverage

Attachment 3**THUNDERBIRD MANEUVER PACKAGE**

A3.1. Thunderbird Maneuver Package. The 57 WG will develop a maneuver package that is designed to provide FAA monitors and air show representatives with a pictorial display of all demonstration maneuvers which may be used by the Thunderbirds. The maneuvers package will include the High, Low and Flat show maneuvers, as well as a typical show site with Thunderbird maneuvering airspace and minimum dimensions for an acrobatic box depicted. (T-2).